



September/October 2014

# Energy News

## Washington State Energy Office

### Energy News Overview

The steady decline in prices for crude oil and refined product since July has shaken up international energy markets and altered geopolitics: see charts on page 4 for recent price trends. Since early July crude oil prices have fallen 25 percent and US gasoline prices are down 20 percent. The decline in prices is in part the result of growing oil production in the US, Canada and a couple of OPEC countries, but also because of slowing economies in Asia and Europe. Prices will likely remain low until after the late Nov. OPEC meeting, where the cartel may or may not agree to lower its production targets. Lower oil and fuel prices have of course benefited consumers, but for some oil producers lower prices translate to tough times. A significant number of OPEC member nations require a global oil price of \$100 or more per barrel to meet their budgetary obligations. For Russia, Venezuela and Iran, lower oil prices have not only reduced state revenues, but have diminished their geopolitical power. Sustained lower oil prices of around \$75 per barrel would also eventually have an impact on high cost producers such as Norway, some US oil shale, and Canadian oil sands projects. Removing high cost non-OPEC producers may be the goal of some of the more financially secure OPEC members.

Nationally, the Energy Information Administration (EIA) released its Winter Fuels outlook in early October: <http://www.eia.gov/forecasts/steo/report/WinterFuels.cfm>. The EIA is forecasting that homeowners, depending on the fuel used to heat their homes, will see a 27 percent decrease in propane bills, a 15 percent decline in heating oil bills, a 5 percent decrease in natural gas bills, and a 2 percent reduction in electricity bills this winter. Part of the reduction in bills is due to lower energy prices, but most of the change is due to a meteorological forecast for a warmer winter. These energy savings, if realized, should give a boost to local economies.

The EIA also reported on the energy-related carbon dioxide emissions, which for 2013 were assessed at 5,396 million metric tons (MMmt) an increase of 129 MMmt or 2.5 percent from 2012: <http://www.eia.gov/environment/emissions/carbon/>. The increase was largely the result of colder weather (remember the polar vortex) which lead to higher fuel and electricity consumption for space heating purposes. A shift back to coal and away from natural gas in the electric power sector also contributed to greater emissions. Despite the increase over 2012, emissions in 2013 were still 10 percent below their 2005 level.

Regionally, the Northwest Power and Conservation Council (NPCC) reported that the Pacific Northwest improved its energy efficiency in 2013, acquiring 268 average megawatts (aMW) of conservation regionally, exceeding the sixth Power Plan target of 260 aMW. Utility projections for 2014-15 are lower at 274 aMW for the two years, but recent history has seen utilities beating their forecast conservation targets. Overall the region appears to be on-track to meet or beat the sixth Power Plan's first 5 year target (2011-2015). In the nearly 35 years since the Power Act became law and the NPCC began developing Power Plans, the Pacific Northwest has achieved 5600 aMW of energy efficiency, which means ratepayers are spending about \$3.5 billion less than they would have spent without energy efficiency.

#### Inside this issue:

Energy News Overview	1
What's Happening in the Energy Office	2
Energy Price Overview	3-5
Energy Headlines	5-6
Recent Reports on Energy and Climate	7
River and Snow Pack	7
Power Exchanged	7
Other Articles	8

# What's Happening in the Energy Office

## Forest Products Financial Assistance—Wood Energy Feasibility Study Grants

The Forest Products Financial Assistance Program (FPFAP) supports the development and expansion of forestry and agroforestry products industries in the State of Washington, with an emphasis on use of woody biomass resulting from forestry management activities and wood products manufacturing to provide thermal energy, electrical energy, engineered fuel products, and/or significant energy efficiency improvements. Commerce is making \$200,000 available for competitively-awarded feasibility study grants to undertake technical, environmental, feedstock and market assessments for projects with a high likelihood of completion. Any non-federal entity may apply, including state agencies, tribes, general and special purpose local governments, non-profit and for-profit corporations, and self-employed individuals. Awards are capped at \$50,000, and recipients must provide at least a one-to-one match of cash and/or in-kind services.

### Funding Priorities

- Projects that examine synergies between the project being studied and the broader ecological and economic needs of the region, including the potential to integrate into an existing or emerging biomass business cluster, are strongly encouraged.
- Projects that utilize wood products manufacturing wastes, as well as those in close proximity to forest management collaboratives, are preferred. Extra credit will be awarded to projects that address a local forest management need, such as forest health treatments or fire hazard reduction efforts.
- Applicants are encouraged to pursue projects that make efficient use of both electrical and thermal energy. Proposals to study the feasibility of stand-alone electrical generation projects will not be considered.

### Application Process

Letters of intent to apply are strongly encouraged, but not mandatory. Letters should be submitted via e-mail by 5pm on November 10, 2014, and include the following:

- A brief description of the project, including work plan, schedule and sources of woody biomass.
- If applicable, a description of how the project responds to local forest management plans.
- If applicable, a description of how the project is a component of, or connects to, a larger economic development initiative or industry cluster.
- A list of anticipated deliverables.
- Names of those conducting the study, and a brief synopsis of qualifications and experience.

**Full applications and must be received via e-mail no later than 5pm on December 1, 2014.**

Awards will be announced in mid-December. [See the RFP announcement for complete details.](http://www.commerce.wa.gov/Documents/FPFAP-RFP-F14-52216-011.pdf) <http://www.commerce.wa.gov/Documents/FPFAP-RFP-F14-52216-011.pdf>

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# Electricity, Petroleum & Natural Gas Prices

## Energy Price Overview

Since early September crude oil prices declined by \$12-14 per barrel and are hovering at just over \$80 for WTI: this is about \$20 per barrel lower than last year at this time. Growing supply from North America and slowing economies in Europe and Asia are cited as the causative factors.

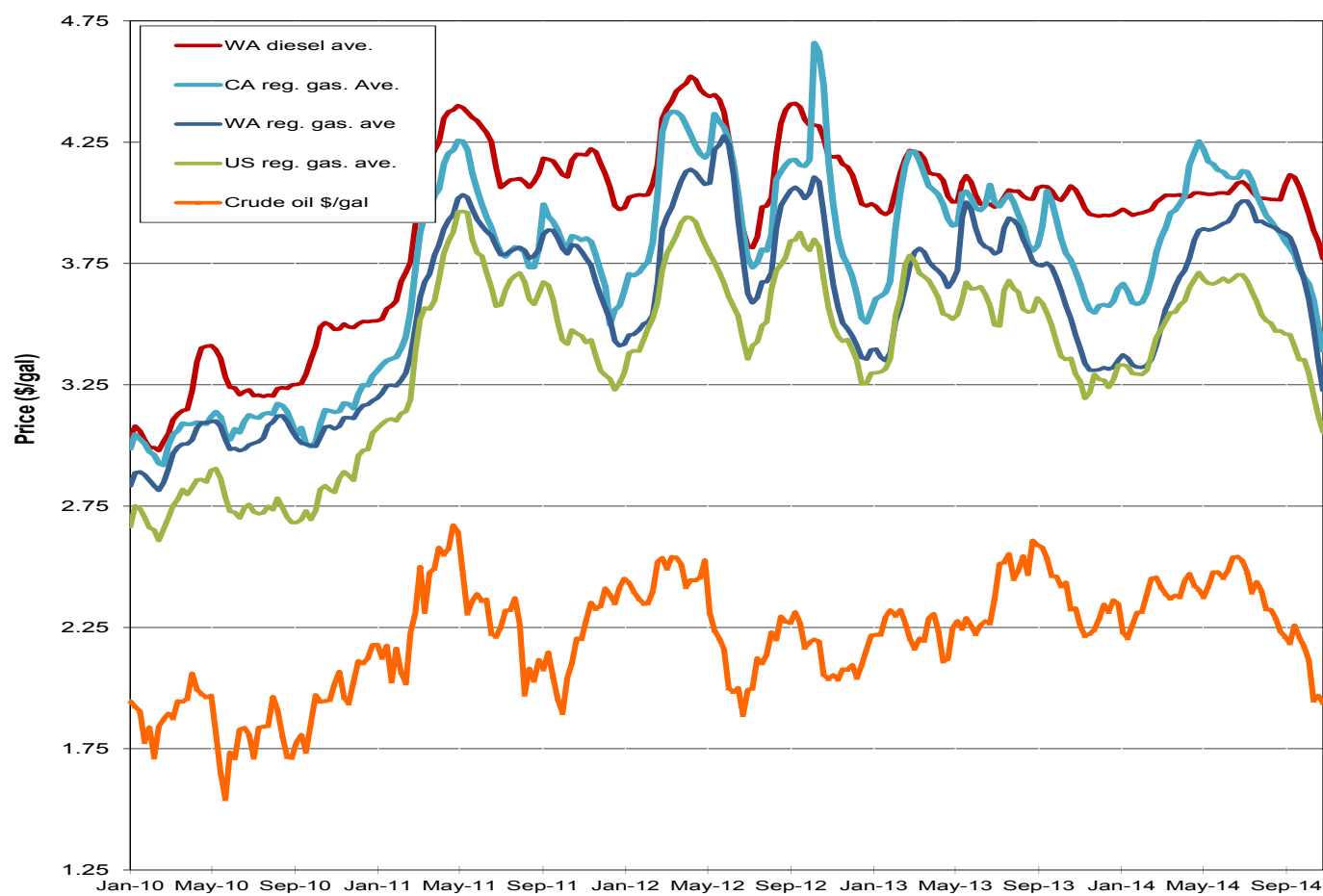
The rapid decline in crude oil prices is being reflected in falling retail prices for gasoline and diesel, with a majority of states posting average gasoline prices below \$3 per gal. At the national level during the last full week in October U.S. gasoline and diesel prices averaged \$3.06 and \$3.64 per gallon respectively, both about 25 cents per gal. lower than end of Oct. last year. In Washington state gasoline and diesel prices have also declined, averaging 3.22 and 3.79 respectively this last week in October, about 25 cents per gal. lower than last year. Nationally and locally gasoline and diesel prices typically reach their annual lows in December.

The price for month ahead NYMEX natural gas declined slightly to \$3.82/MMBtu during October. Spot prices have been running around \$3.63/MMBtu down from end of Sept. Locally, the natural gas month-ahead future contract for Sumas this past week was down from a month ago, averaging \$3.32/MMBtu. The EIA reported a weekly natural gas storage injections of 87 Bcf. Injections have been running well a head of the 5-year averages and storage is now "only" 8.2 percent below its 5-year average; in the West we are 6.5 percent below our 5 year average. In April national gas storage was 50 percent below the 5 year average for that month.

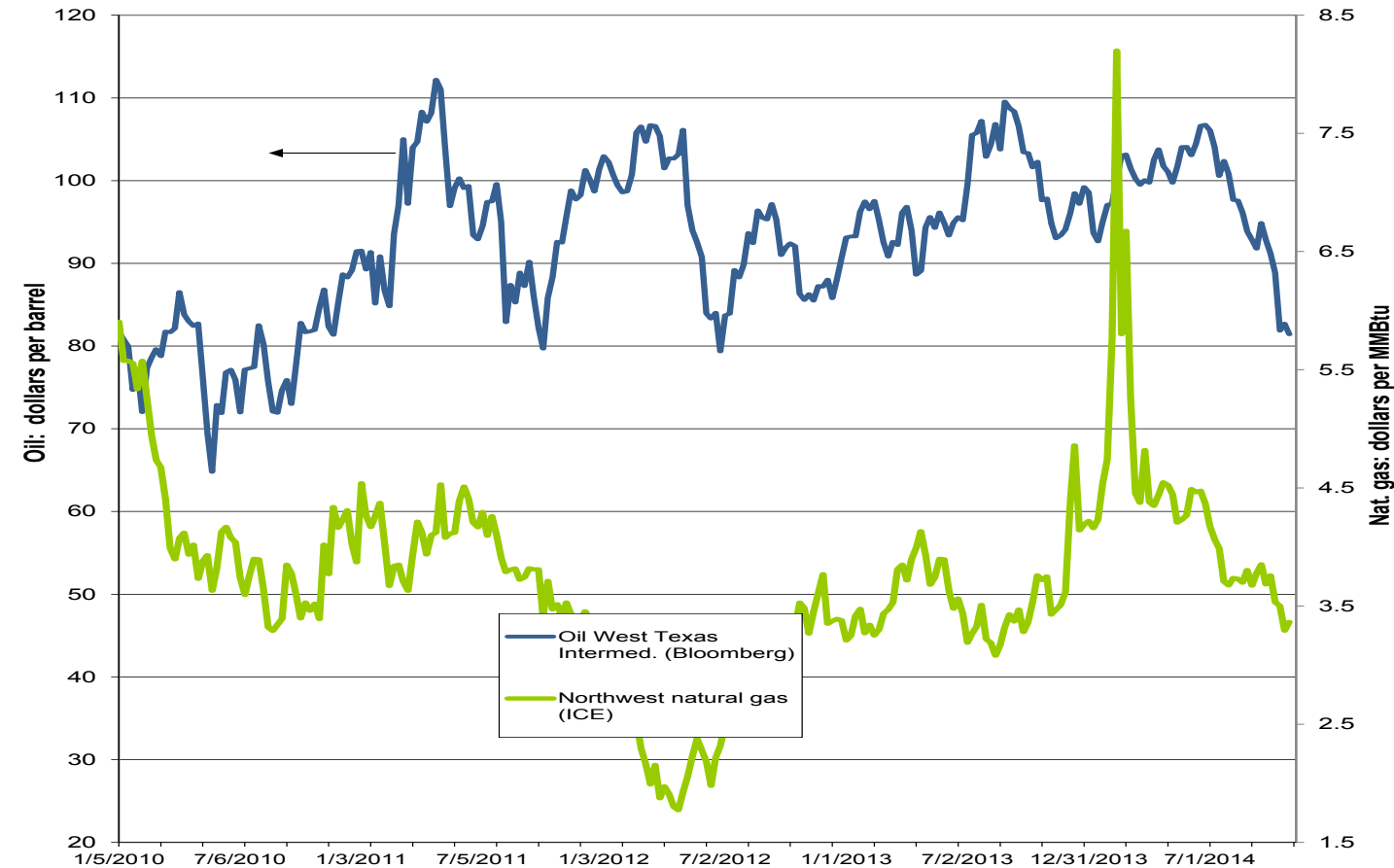
Electricity spot prices at the Mid C decreased by about \$6/megawatt-hr relative to Sept, averaging \$32.5/megawatt-hr during October. Mid C spot market prices have declined from average summer prices of around \$40/megawatt-hr.

Energy Price Summary	Current	Month Ago	Year Ago
Monthly Range at Mid-C (Peak: \$ per MWh)	36-38.8	32-48.8	27.5-48.5
Average Mid C price (Peak hours \$ MWh)	32.5	39.0	37.8
Electricity WA Retail: Aug. (cents/kWh)	7.17	7.19	7.01
Natural gas Kingsgate spot price (next day: \$ per million BTU)	3.36	3.81	3.75
Natural gas Sumas futures price (next month \$ per million BTU)	3.32	3.80	3.39
Natural gas Sumas monthly average: May (\$ per million BTU)	3.75	4.22	3.15
Natural gas H.H. futures (NYMEX next month: \$ per million BTU)	3.88	3.93	3.65
E85 (national average: \$ per gallon gasoline)	3.29	3.76	3.57
Ethanol (CBT next month contract: \$ per gallon)	1.76	2.01	1.79
Corn (CBT next month contract: \$ per bushel)	3.63	3.58	4.30
Petroleum, West Texas Intermediate futures (\$ per barrel)	81.4	93.9	97.8
Seattle gasoline price (\$ per gallon)	3.31	3.98	3.48
Gasoline futures (NYMEX next month: \$ per gallon)	2.31	2.59	2.63
State diesel price (\$ per gallon)	3.79	4.02	4.05
Heating oil futures (NYMEX next month: \$ per gallon)	2.55	2.75	2.96
U.S. residential propane price report (reported Oct.-Mar.)	NA	NA	NA
<b>Clean Cities: Alternative Fuel Price Report, July 2014</b>	<b>US Avg current</b>	<b>West Coast current qtr</b>	<b>West Coast last qtr avg</b>
Ethanol E85 (\$ per gas gallon equiv. )	4.55	5.06	5.09
Biodiesel B20 (\$ per diesel gallon equiv.)	4.06	4.22	4.20
Biodiesel B99-100 (\$ per diesel gallon equiv.)	4.66	4.83	4.95
Compressed Natural Gas (\$ per gas gallon equiv. )	2.17	2.42	2.36
Propane (\$ per gas gallon equiv.)	4.24	4.36	4.64

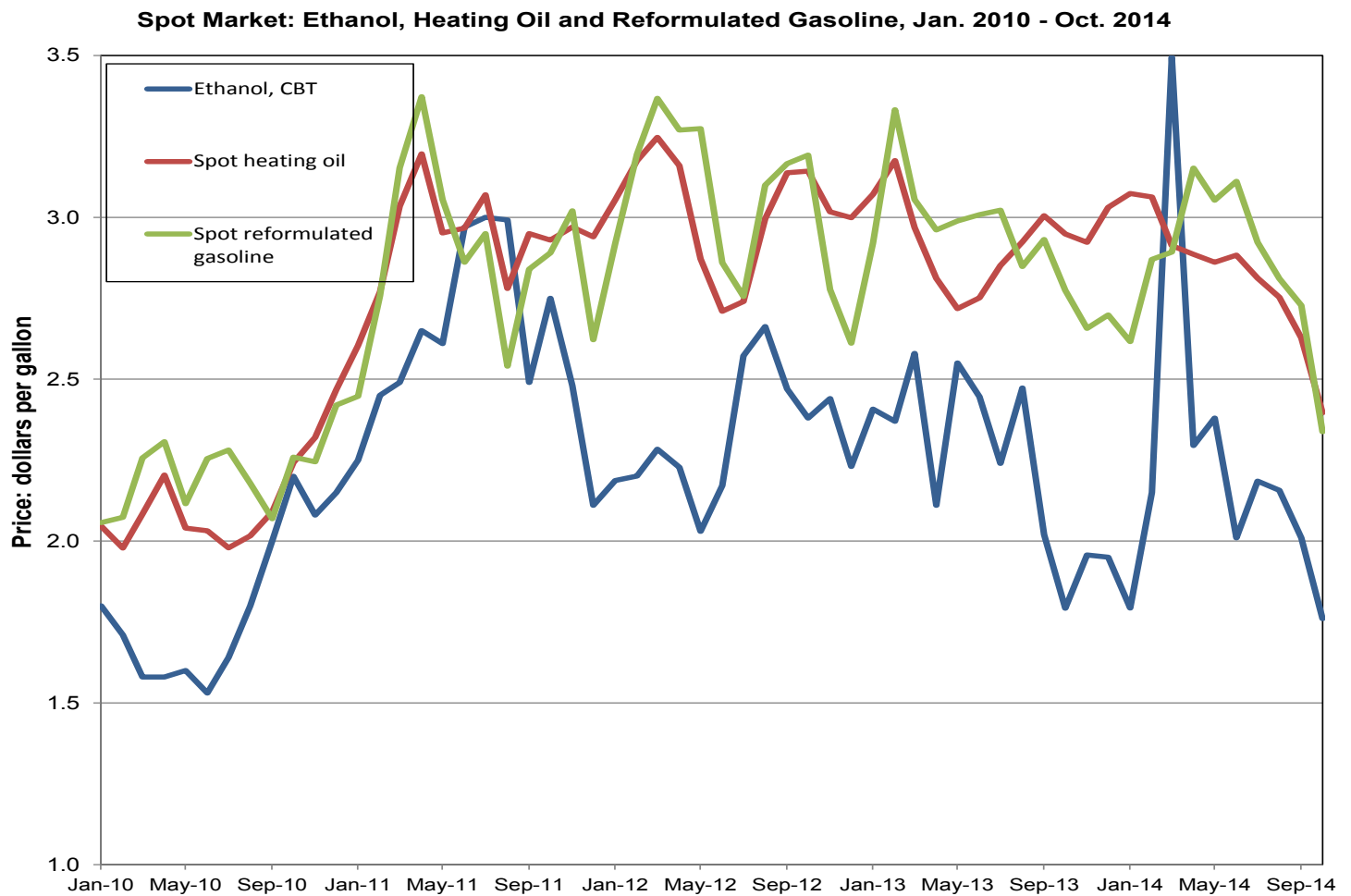
Retail Gasoline and Diesel Prices: Jan. 2010 - Oct. 2014



Spot Crude Oil (WTI), Natural Gas (Kingsgate hub): Jan. 2010 - Oct. 2014







## Energy Headlines - If you only have time to read a few articles—read these.

Biofuel Companies Look Beyond the Gas Tank. New York Times.

<http://www.nytimes.com/2014/10/18/business/biofuel-companies-look-beyond-the-gas-tank.html?partner=rss&emc=rss>

Climate Change Threatens National Security, Pentagon Says. Washington Post.

<http://www.washingtonpost.com/news/checkpoint/wp/2014/10/13/climate-change-threatens-national-security-pentagon-says/>

Pot & Power: Power Planning Council Estimates Demand Growth & Conservation Potential

<http://www.energynaturalresourceslaw.com/2014/09/pot-and-power-power-planning-council-estimates-demand-growth-and-conservation-potential.html>

Nevada Lawmakers Approve Tesla Tax Breaks. USA Today.

<http://www.usatoday.com/story/money/business/2014/09/12/nevada-approves-tesla-tax-breaks/15495355/>

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Editorial: It's Time to Tweak Columbia River Treaty. Vancouver Columbian.

<http://www.columbian.com/news/2014/sep/23/in-our-view-its-time-to-tweak-treaty/>

Natural Gas Won't Save Us from Global Warming, Study Confirms. Washington Post.

<http://www.washingtonpost.com/blogs/wonkblog/wp/2014/09/24/natural-gas-wont-save-us-from-global-warming-study-confirms/>

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Montana Coal Mine Deal Aims to Boost Asian Exports. Vancouver Columbian.

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California Charges Ahead with Electric Vehicles. San Jose Mercury News.

[http://www.mercurynews.com/rss/ci\\_26493736](http://www.mercurynews.com/rss/ci_26493736)

Puget Sound Energy Ordered to Share Gain with Ratepayers South Sound Business Examiner.

<http://www.businessexaminer.com/blog/September-2014/PSE-ordered-to-share-gain-with-ratepayers/>

The Straight Dope: Marijuana Cultivation Uses a Lot of Electricity. Forbes Magazine.

<http://www.forbes.com/sites/peterdetwiler/2014/09/10/the-straight-dope-marijuana-cultivation-uses-a-lot-of-electricity/?ss=energy>

Fate of Aluminum Subsidy Warrants Explanation from Bonneville Power Administration, Court Says

<http://www.courthousenews.com/2014/09/18/71560.htm>

\$8 Billion Proposal Aims to Send Wyoming Wind Energy to Los Angeles Area within a Decade. Assoc. Press

<http://www.usnews.com/news/technology/articles/2014/09/24/wind-energy-proposal-would-light-los-angeles-homes>

Portland's Vestas Picks Up Another Big Texas Order from Duke. Sustainable Business Oregon.

<http://www.bizjournals.com/portland/blog/sbo/2014/09/portlands-vestas-picks-up-another-big-texas-order.html>

Snohomish PUD Abandons Tidal Energy Project. Everett Herald.

<http://www.heraldnet.com/article/20140930/BIZ/309309998/1005/PUD-abandons-tidal-energy-project->

Cities Prepare for Warm Climate without Saying So. Associated Press.

<http://www.seattlepi.com/news/science/article/Cities-prepare-for-warm-climate-without-saying-so-5741091.php>

Trying to Raise Profile of Climate Change for Washington Voters. New York Times, Oct. 27.

<http://www.nytimes.com/2014/10/28/us/trying-to-raise-profile-of-climate-change-for-washington-voters.html?partner=rss&emc=rss&r=0>

Greenhouse Gas Levels Rising at Fastest Rate since 1984. British Broadcasting Corporation.

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Taking a Call for Climate Change to the Streets. New York Times.

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<http://www.nytimes.com/2014/09/23/us/study-discounts-human-impact-on-rising-temperatures-in-northwest.html?partner=rss&emc=rss>

A Carbon Tax Would Push Washington State's Gasoline Prices Higher. Crosscut Seattle.

<http://crosscut.com/2014/09/25/environment/122047/carbon-taxes-jay-inslee-washington-state/>

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<http://portlandtribune.com/sl/235252-100599-oregon-global-warming-commission-endorses-obama-power-plant-regulations>

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<http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/the-great-canadian-lng-poker-game/article20870551/?cmpid=rss1>

China Finally Acknowledges Unfair Pricing, to Sharply Lower Renewable Tariffs by 2020. Renewable Energy World.

<http://www.renewableenergyworld.com/rea/blog/post/2014/10/china-finally-acknowledges-unfair-pricing-to-sharply-lower-renewable-tariffs-by-2020?cmpid=rss>

Pacific Northwest Energy Efficiency Gains Hit \$3.5 Billion. Electric Co-op Today.

<http://www.ect.coop/industry/trends-reports-analyses/northwest-energy-efficiency-gains-hit-3-5-billion/74305>

WA Ranked Eighth for Energy Efficiency. Seattle Post-Intelligencer.

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<http://www.grandcoulee.com/story/2014/10/15/news/third-power-plant-work-will-rebuild-3000-tons-of-precision/4808.html>

Repairs Continuing at Wanapum Dam - Goal to fill pool part of the way by end of the year. Columbia Basin Herald.

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Texas Plant to Capture, and Then Reuse, Carbon. New York Times.

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Canada Switches On World's First Carbon Capture Power Plant. The Guardian.

[http://www.theguardian.com/environment/2014/oct/01/canada-switches-on-worlds-first-carbon-capture-power-plant?CMP=twl\\_gu](http://www.theguardian.com/environment/2014/oct/01/canada-switches-on-worlds-first-carbon-capture-power-plant?CMP=twl_gu)

## Recent Reports on Energy and Climate Change

Initiative to Modernize Natural Gas Transmission and Distribution. July 2014.

<http://www.energy.gov/articles/factsheet-initiative-help-modernize-natural-gas-transmission-and-distribution>

Tesoro Savage Petroleum Terminal submission to the Energy Facility Siting Evaluation Council

<http://www.efsec.wa.gov/Tesoro-Savage.shtml>

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Fifth Assessment Report. Intergovernmental Panel on Climate Change (IPCC) 2013-14.

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First academic study released in EDF's groundbreaking methane emissions series. Environmental Defense Fund, Sept 2013.

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Environmental Protection Agency 2012 Climate Change Indicators Report.

<http://www.epa.gov/climatechange/science/indicators/>

Report on the First Quadrennial Technology Review, US Dept. of Energy

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Natural Gas Weekly Update: <http://www.eia.gov/naturalgas/weekly/?src=Natural-b1>

Monthly Energy Review, EIA : <http://www.eia.gov/totalenergy/data/monthly/>

Short-term Energy Outlook, EIA : <http://www.eia.gov/forecasts/steo/>

This Week in Petroleum. EIA, : <http://www.eia.gov/oog/info/twip/twip.asp>

Annual Energy Outlook 2014: <http://www.eia.gov/forecasts/aeo/>

## River & Snow Pack Info

- Observed Sept. stream flow at The Dalles: 107% of average.
- Observed Sept. precipitation above The Dalles: 90% of average.
- Forecast runoff at The Dalles, Aug : 108.3 million acre-feet, 107% of 30-year average
- Forecast snowpack volume: NA.
- Federal hydropower generation in Sept. : 5,408 aMW, 2009-2013 average: 5,912 aMW.
- Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak): Sept. 84%, 5-year average: 84%.

## River Flow

Average flow at Lower Snake and Columbia dams

Data for October 26	Daily Outflow (kcfs)	Avg Oct 26 Out-flow for last 10 years (kcfs)
Lower Granite	20.9	19.2
The Dalles	80.0	99.4





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